

Serial No.: 09/477,082
Filed: December 30, 1999
Group Art Unit: 1642

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

Claims 1-10 (canceled)

Claim 11 (previously presented): The method according to claim 51 or 63, wherein the cancer is a tumor in which a *myc* gene is amplified.

Claim 12 (previously presented): The method according to claim 51 or 63, wherein the cancer is a neuroblastoma.

Claims 13-15 (canceled)

Claim 16 (currently amended): The method according to claim ~~45~~ 51 or 63, wherein the methylation of *CASP8* genomic DNA is detected by methylation polymerase chain reaction (PCR) assay.

Claims 17-28 (canceled)

Claim 29 (currently amended): A kit for detecting inactivation of a *CASP8* gene expression, comprising *CASP8* gene-specific oligonucleotide primers for amplification of at least a part of the 5' untranslated region of *CASP8* genomic DNA, wherein said primers are used in a methylation polymerase chain reaction (PCR) assay.

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Claims 30-50 (canceled)

Claim 51 (currently amended): A method for diagnosis of a cancer comprising detecting inactivation of a *CASP8* gene expression in a cell from a subject, wherein said inactivation of a *CASP8* gene expression in the cell is indicative of the presence of a cancer and wherein said method comprises ~~at least one assay selected from the group consisting of detecting a methylation of *CASP8* genomic DNA, detecting the absence of expression of a *CASP8* protein, and detecting the absence of a *CASP8* mRNA.~~

Claims 52-55 (canceled)

Claim 56 (previously presented): A method for detecting inactivation of a *CASP8* gene expression in a primary cancer cell, comprising detecting a methylation of *CASP8* genomic DNA.

Claim 57 (previously presented): The method according to claim 56, wherein the methylation of *CASP8* genomic DNA is detected by methylation polymerase chain reaction (PCR) assay.

Claim 58 (currently amended): The kit of claim 29, wherein the kit comprises *CASP8* gene-specific oligonucleotide PCR primers for amplification of SEQ ID NO: 1 or SEQ ID NO: 2.

Claim 59 (previously presented): The kit of claim 58, wherein the kit comprises at least one oligonucleotide PCR primer selected from the group consisting of SEQ ID NO: 29, SEQ ID NO: 30, SEQ ID NO: 31, SEQ ID NO: 32, SEQ ID NO: 33, and SEQ ID NO: 34.

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Claim 60 (previously presented): The method according to claim 56, wherein the methylation occurs in the 5' untranslated region of *CASP8* genomic DNA.

Claim 61 (previously presented): The method according to claim 60, wherein the methylation occurs in sequences selected from the group consisting of SEQ ID NO: 1 and SEQ ID NO: 2.

Claim 62 (previously presented): The method according to claim 57, wherein the PCR assay utilizes at least one of the primer sequences selected from the group consisting of SEQ ID NO: 29, SEQ ID NO: 30, SEQ ID NO: 31, SEQ ID NO: 32, SEQ ID NO: 33, and SEQ ID NO: 34.

Claim 63 (currently amended): A method for prognosis of a cancer comprising detecting inactivation of a *CASP8* gene expression in a cancer cell from a subject, wherein said inactivation of a *CASP8* gene expression in the cancer cell is indicative of the inefficiency of apoptosis induced by activated death receptors, chemotherapeutic drugs, or irradiation, and wherein said method comprises ~~at least one assay selected from the group consisting of detecting a methylation of *CASP8* genomic DNA, detecting the absence of expression of a *CASP8* protein, and detecting the absence of a *CASP8* mRNA.~~

Claims 64-65 (canceled)

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For Examiner's convenience, presented below are pending claims as amended arranged in order from independent to dependent:

Claim 56 (previously presented): A method for detecting inactivation of a *CASP8* gene expression in a primary cancer cell, comprising detecting a methylation of *CASP8* genomic DNA.

Claim 60 (previously presented): The method according to claim 56, wherein the methylation occurs in the 5' untranslated region of *CASP8* genomic DNA.

Claim 61 (previously presented): The method according to claim 60, wherein the methylation occurs in sequences selected from the group consisting of SEQ ID NO: 1 and SEQ ID NO: 2.

Claim 57 (previously presented): The method according to claim 56, wherein the methylation of *CASP8* genomic DNA is detected by methylation polymerase chain reaction (PCR) assay.

Claim 62 (previously presented): The method according to claim 57, wherein the PCR assay utilizes at least one of the primer sequences selected from the group consisting of SEQ ID NO: 29, SEQ ID NO: 30, SEQ ID NO: 31, SEQ ID NO: 32, SEQ ID NO: 33, and SEQ ID NO: 34.

Claim 51 (currently amended): A method for diagnosis of a cancer comprising detecting inactivation of a *CASP8* gene expression in a cell from a subject, wherein said inactivation of a

CASP8 gene expression in the cell is indicative of the presence of a cancer and wherein said method comprises ~~at least one assay selected from the group consisting of detecting a methylation of *CASP8* genomic DNA, detecting the absence of expression of a *CASP8* protein, and detecting the absence of a *CASP8* mRNA.~~

Claim 63 (currently amended): A method for prognosis of a cancer comprising detecting inactivation of a *CASP8* gene expression in a cancer cell from a subject, wherein said inactivation of a *CASP8* gene expression in the cancer cell is indicative of the inefficiency of apoptosis induced by activated death receptors, chemotherapeutic drugs, or irradiation, and wherein said method comprises ~~at least one assay selected from the group consisting of detecting a methylation of *CASP8* genomic DNA, detecting the absence of expression of a *CASP8* protein, and detecting the absence of a *CASP8* mRNA.~~

Claim 11 (previously presented): The method according to claim 51 or 63, wherein the cancer is a tumor in which a *myc* gene is amplified.

Claim 12 (previously presented): The method according to claim 51 or 63, wherein the cancer is a neuroblastoma.

Claim 16 (currently amended): The method according to claim ~~45~~ 51 or 63, wherein the methylation of *CASP8* genomic DNA is detected by methylation polymerase chain reaction (PCR) assay.

Claim 29 (currently amended): A kit for detecting inactivation of a *CASP8* gene expression, comprising *CASP8* gene-specific oligonucleotide primers for amplification of at least

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a part of the 5' untranslated region of *CASP8* genomic DNA, wherein said primers are used in a methylation polymerase chain reaction (PCR) assay.

Claim 58 (currently amended): The kit of claim 29, wherein the kit comprises *CASP8* gene-specific oligonucleotide PCR primers for amplification of SEQ ID NO: 1 or SEQ ID NO: 2.

Claim 59 (previously presented): The kit of claim 58, wherein the kit comprises at least one oligonucleotide PCR primer selected from the group consisting of SEQ ID NO: 29, SEQ ID NO: 30, SEQ ID NO: 31, SEQ ID NO: 32, SEQ ID NO: 33, and SEQ ID NO: 34.